BME 4440: Science Policy, from Concept to Conclusion

Instructor:

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Course description:

As scientific and technological discoveries continue to change our world and society at a rapid pace, it has become imperative that our policymaking approach be informed by science. From energy policy to climate change, from health care to bioterrorism, from science education to technology innovation it has become critical to have professional scientists and engineers actively engaged in the policymaking process. However, a fundamental issue facing today's government is the fact that too few scientists have experience with the inner workings of public policymaking and too few policymakers have significant science or engineering knowledge. This large gap between the two fields needs to be bridged if we are to have a society where science influences the course we take.

Science Policy, from Concept to Conclusion aims to fill this void. Scientists and engineers in this course will learn about the policymaking process through active research and advocacy work. Some class time will be devoted to broadening student perspectives on science policy through lectures by Cornell faculty and visiting government officials, group discussions of reading assignments, and other activities. The primary activity of the course, however, will be a real policy-making exercise that builds over the course of the full semester. Working in small groups students will identify an issue at the intersection of science and public policy, thoroughly research the issue, formulate a detailed plan to address the issue, and implement their plan for solving the problem toward the end of the term. Examples may include producing technical reports and analysis, drafting legislation, commenting on Federal or State rulemaking, writing legal briefs to support legal action, launching public outreach campaigns, or raising press awareness of an issue. There will be opportunities to meet with local, state, and federal lawmakers and government officials to try to advance policy ideas.

Course website:

Please check the BME 4440 website on Blackboard frequently. Course announcements, reading materials, critical reading questions, information about the project, and extra materials will all be distributed via the website.

Course assignments:

Critical reading questions: Short, reflective responses to reading assignments and lectures due the evening before the material will be discussed. In these responses it must be clear from your writing that you have read the assigned reading or attended the lectures and have thought carefully about the concepts and ideas. In most cases, 2-3 very well-crafted sentences should be adequate for answering these questions. The goal of these questions is to encourage you to be active about what and how you are learning. You most effectively learn and integrate new concepts when you actively challenge your own understanding.

Policy advocacy project: In teams of 3-5. This project will be the primary thing you do over the course of the term. The broad goal of the project is to become an effective advocate in a focused area at the intersection of science and public policy. To do this, you will generate a number of documents over the course of the term and go through multiple rounds of revision to improve the quality of this work. At the end of the term, these documents will support your efforts to change policy. What particular materials are generated will vary by the project, but will likely include:

- Long-form technical report on your issue, evaluating the problem and potential policy options
- Short-form summary of the issue and options
- Advocacy piece that identifies a preferred option and argues for adoption
- Strategy document that analyzes approaches to advancing issue (e.g. legislation, regulation, lawsuit, etc.)
- Draft legislative, regulatory, or legal brief language
- Talking points
- Opponent analysis and counter arguments
- Speeches, Op-Eds, press and public outreach materials

Grading:

15% active class participation
15% critical reading assignments
70% group advocacy project

Schedule:

Lecture: Friday, 1:25 to 4:25, 230 Malott Hall

Academic integrity:

Academic integrity is expected of all students of Cornell University at all times, whether in the presence or absence of members of the faculty. Violations of the code of academic integrity will be prosecuted through the Academic Integrity Hearing Board. For more information, see the following page on academic integrity: http://cuinfo.cornell.edu/Academic/AIC.html.